

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/583,676  
Source: IFWP  
Date Processed by STIC: 7/10/06

# ***ENTERED***

## CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/583, 676

CRF Edit Date: 7/10/06  
Edited by: [Signature]

\_\_\_ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

\_\_\_ Corrected the SEQ ID NO. Sequence numbers edited were:

\_\_\_\_\_

\_\_\_ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

\_\_\_\_\_

✓  
\_\_\_ Deleted: 1 invalid beginning/end-of-file text ; \_\_\_ page numbers

\_\_\_ Inserted mandatory headings/numeric identifiers, specifically:

\_\_\_\_\_

\_\_\_ Moved responses to same line as heading/numeric identifier, specifically:

\_\_\_\_\_

\_\_\_ Other:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



IFWP

## RAW SEQUENCE LISTING

DATE: 07/10/2006

PATENT APPLICATION: US/10/583,676

TIME: 18:21:45

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\07102006\J583676.raw

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3 <110> APPLICANT: Festersen, Rikke Monica
4     Nielsen, Anders Viksoe
5     Joergensen, Christel Thea
6     Christensen, Lars Lehmann Hylling
8 <120> TITLE OF INVENTION: Mashing Process
10 <130> FILE REFERENCE: 10429.204-US
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/583,676
C--> 12 <141> CURRENT FILING DATE: 2006-06-19
12 <160> NUMBER OF SEQ ID NOS: 20
14 <170> SOFTWARE: PatentIn version 3.3
16 <210> SEQ ID NO: 1
17 <211> LENGTH: 332
18 <212> TYPE: PRT
19 <213> ORGANISM: Aspergillus aculeatus
21 <400> SEQUENCE: 1
23 Met Lys Leu Leu Asn Leu Leu Val Ala Ala Ala Ala Gly Ser Ala
24 1          5          10          15
27 Val Ala Ala Pro Thr His Glu His Thr Lys Arg Ala Ser Val Phe Glu
28          20          25          30
31 Trp Ile Gly Ser Asn Glu Ser Asp Ala Glu Phe Gly Thr Ala Ile Pro
32          35          40          45
35 Gly Thr Trp Gly Ile Asp Tyr Ile Phe Pro Asp Thr Ser Ala Ile Ala
36          50          55          60
39 Thr Leu Val Ser Lys Gly Met Asn Ile Phe Arg Val Gln Phe Met Met
40 65          70          75          80
43 Glu Arg Leu Val Pro Asn Ser Met Thr Gly Ser Tyr Asp Asp Ala Tyr
44          85          90          95
47 Leu Asn Asn Leu Thr Thr Val Val Asn Ala Ile Ala Ala Ala Gly Val
48          100         105         110
51 His Ala Ile Val Asp Pro His Asn Tyr Gly Arg Tyr Asn Asn Glu Ile
52          115         120         125
55 Ile Ser Ser Thr Ala Asp Phe Gln Thr Phe Trp Gln Asn Leu Ala Gly
56          130         135         140
59 Gln Phe Lys Asp Asn Asp Leu Val Ile Phe Asp Thr Asn Asn Glu Tyr
60 145         150         155         160
63 Asn Thr Met Asp Gln Thr Leu Val Leu Asp Leu Asn Gln Ala Ala Ile
64          165         170         175
67 Asp Gly Ile Arg Ala Ala Gly Ala Thr Ser Gln Tyr Ile Phe Ala Glu
68          180         185         190
71 Gly Asn Ser Trp Ser Gly Ala Trp Thr Trp Ala Asp Ile Asn Asp Asn
72          195         200         205
75 Met Lys Ala Leu Thr Asp Pro Gln Asp Lys Leu Val Tyr Glu Met His
76          210         215         220

```

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TIME: 18:21:45

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\07102006\J583676.raw

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79 Gln Tyr Leu Asp Ser Asp Gly Ser Gly Thr Ser Gly Val Cys Val Ser
80 225                230                235                240
83 Glu Thr Ile Gly Ala Glu Arg Leu Gln Ala Ala Thr Gln Trp Leu Lys
84                245                250                255
87 Asp Asn Gly Lys Val Asp Ile Leu Gly Glu Tyr Ala Gly Gly Ala Asn
88                260                265                270
91 Asp Val Cys Arg Thr Ala Ile Ala Gly Met Leu Glu Tyr Met Ala Asn
92                275                280                285
95 Asn Thr Asp Val Trp Lys Gly Ala Val Trp Trp Thr Ala Gly Pro Trp
96                290                295                300
99 Trp Ala Asp Tyr Met Phe Ser Met Glu Pro Pro Ser Gly Pro Ala Tyr
100 305                310                315                320
103 Ser Gly Met Leu Asp Val Leu Glu Pro Tyr Leu Gly
104                325                330
107 <210> SEQ ID NO: 2
108 <211> LENGTH: 238
109 <212> TYPE: PRT
110 <213> ORGANISM: Aspergillus aculeatus
112 <400> SEQUENCE: 2
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115 1                5                10                15
118 Leu Gln Arg Arg Ser Asp Phe Cys Gly Gln Trp Asp Thr Ala Thr Ala
119                20                25                30
122 Gly Asp Phe Thr Leu Tyr Asn Asp Leu Trp Gly Glu Ser Ala Gly Thr
123                35                40                45
126 Gly Ser Gln Cys Thr Gly Val Asp Ser Tyr Ser Gly Asp Thr Ile Ala
127                50                55                60
130 Trp His Thr Ser Trp Ser Trp Ser Gly Gly Ser Ser Ser Val Lys Ser
131 65                70                75                80
134 Tyr Val Asn Ala Ala Leu Thr Phe Thr Pro Thr Gln Leu Asn Cys Ile
135                85                90                95
138 Ser Ser Ile Pro Thr Thr Trp Lys Trp Ser Tyr Ser Gly Ser Ser Ile
139                100               105               110
142 Val Ala Asp Val Ala Tyr Asp Thr Phe Leu Ala Glu Thr Ala Ser Gly
143                115               120               125
146 Ser Ser Lys Tyr Glu Ile Met Val Trp Leu Ala Ala Leu Gly Gly Ala
147                130               135               140
150 Gly Pro Ile Ser Ser Thr Gly Ser Thr Ile Ala Thr Pro Thr Ile Ala
151 145               150               155               160
154 Gly Val Asn Trp Lys Leu Tyr Ser Gly Pro Asn Gly Asp Thr Thr Val
155                165               170               175
158 Tyr Ser Phe Val Ala Asp Ser Thr Thr Glu Ser Phe Ser Gly Asp Leu
159                180               185               190
162 Asn Asp Phe Phe Thr Tyr Leu Val Asp Asn Glu Gly Val Ser Asp Glu
163                195               200               205
166 Leu Tyr Leu Thr Thr Leu Glu Ala Gly Thr Glu Pro Phe Thr Gly Ser
167                210               215               220
170 Asn Ala Lys Leu Thr Val Ser Glu Tyr Ser Ile Ser Ile Glu
171 225                230                235

```

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TIME: 18:21:45

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\07102006\J583676.raw

174 &lt;210&gt; SEQ ID NO: 3

175 &lt;211&gt; LENGTH: 435

176 &lt;212&gt; TYPE: PRT

177 &lt;213&gt; ORGANISM: Humicola insolens

179 &lt;400&gt; SEQUENCE: 3

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181 Met Ala Arg Gly Thr Ala Leu Leu Gly Leu Thr Ala Leu Leu Leu Gly
182 1          5          10          15
185 Leu Val Asn Gly Gln Lys Pro Gly Glu Thr Lys Glu Val His Pro Gln
186          20          25          30
189 Leu Thr Thr Phe Arg Cys Thr Lys Arg Gly Gly Cys Lys Pro Ala Thr
190          35          40          45
193 Asn Phe Ile Val Leu Asp Ser Leu Ser His Pro Ile His Arg Ala Glu
194          50          55          60
197 Gly Leu Gly Pro Gly Gly Cys Gly Asp Trp Gly Asn Pro Pro Pro Lys
198 65          70          75          80
201 Asp Val Cys Pro Asp Val Glu Ser Cys Ala Lys Asn Cys Ile Met Glu
202          85          90          95
205 Gly Ile Pro Asp Tyr Ser Gln Tyr Gly Val Thr Thr Asn Gly Thr Ser
206          100         105         110
209 Leu Arg Leu Gln His Ile Leu Pro Asp Gly Arg Val Pro Ser Pro Arg
210          115         120         125
213 Val Tyr Leu Leu Asp Lys Thr Lys Arg Arg Tyr Glu Met Leu His Leu
214          130         135         140
217 Thr Gly Phe Glu Phe Thr Phe Asp Val Asp Ala Thr Lys Leu Pro Cys
218 145          150         155         160
221 Gly Met Asn Ser Ala Leu Tyr Leu Ser Glu Met His Pro Thr Gly Ala
222          165         170         175
225 Lys Ser Lys Tyr Asn Pro Gly Gly Ala Tyr Tyr Gly Thr Gly Tyr Cys
226          180         185         190
229 Asp Ala Gln Cys Phe Val Thr Pro Phe Ile Asn Gly Leu Gly Asn Ile
230          195         200         205
233 Glu Gly Lys Gly Ser Cys Cys Asn Glu Met Asp Ile Trp Glu Ala Asn
234          210         215         220
237 Ser Arg Ala Ser His Val Ala Pro His Thr Cys Asn Lys Lys Gly Leu
238 225          230         235         240
241 Tyr Leu Cys Glu Gly Glu Glu Cys Ala Phe Glu Gly Val Cys Asp Lys
242          245         250         255
245 Asn Gly Cys Gly Trp Asn Asn Tyr Arg Val Asn Val Thr Asp Tyr Tyr
246          260         265         270
249 Gly Arg Gly Glu Glu Phe Lys Val Asn Thr Leu Lys Pro Phe Thr Val
250          275         280         285
253 Val Thr Gln Phe Leu Ala Asn Arg Arg Gly Lys Leu Glu Lys Ile His
254          290         295         300
257 Arg Phe Tyr Val Gln Asp Gly Lys Val Ile Glu Ser Phe Tyr Thr Asn
258 305          310         315         320
261 Lys Glu Gly Val Pro Tyr Thr Asn Met Ile Asp Asp Glu Phe Cys Glu
262          325         330         335
265 Ala Thr Gly Ser Arg Lys Tyr Met Glu Leu Gly Ala Thr Gln Gly Met
266          340         345         350

```

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Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\07102006\J583676.raw

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269 Gly Glu Ala Leu Thr Arg Gly Met Val Leu Ala Met Ser Ile Trp Trp
270          355          360          365
273 Asp Gln Gly Gly Asn Met Glu Trp Leu Asp His Gly Glu Ala Gly Pro
274          370          375          380
277 Cys Ala Lys Gly Glu Gly Ala Pro Ser Asn Ile Val Gln Val Glu Pro
278 385          390          395          400
281 Phe Pro Glu Val Thr Tyr Thr Asn Leu Arg Trp Gly Glu Ile Gly Ser
282          405          410          415
285 Thr Tyr Gln Glu Val Gln Lys Pro Lys Pro Lys Pro Gly His Gly Pro
286          420          425          430
289 Arg Ser Asp
290          435
293 <210> SEQ ID NO: 4
294 <211> LENGTH: 254
295 <212> TYPE: PRT
296 <213> ORGANISM: Humicola insolens
298 <400> SEQUENCE: 4
300 Met Leu Lys Ser Ala Leu Leu Leu Gly Pro Ala Ala Val Ser Val Gln
301 1          5          10          15
304 Ser Ala Ser Ile Pro Thr Ile Pro Ala Asn Leu Glu Pro Arg Gln Ile
305          20          25          30
308 Arg Ser Leu Cys Glu Leu Tyr Gly Tyr Trp Ser Gly Asn Gly Tyr Glu
309          35          40          45
312 Leu Leu Asn Asn Leu Trp Gly Lys Asp Thr Ala Thr Ser Gly Trp Gln
313          50          55          60
316 Cys Thr Tyr Leu Asp Gly Thr Asn Asn Gly Gly Ile Gln Trp Ser Thr
317 65          70          75          80
320 Ala Trp Glu Trp Gln Gly Ala Pro Asp Asn Val Lys Ser Tyr Pro Tyr
321          85          90          95
324 Val Gly Lys Gln Ile Gln Arg Gly Arg Lys Ile Ser Asp Ile Asn Ser
325          100          105          110
328 Met Arg Thr Ser Val Ser Trp Thr Tyr Asp Arg Thr Asp Ile Arg Ala
329          115          120          125
332 Asn Val Ala Tyr Asp Val Phe Thr Ala Arg Asp Pro Asp His Pro Asn
333          130          135          140
336 Trp Gly Gly Asp Tyr Glu Leu Met Ile Trp Leu Ala Arg Tyr Gly Gly
337 145          150          155          160
340 Ile Tyr Pro Ile Gly Thr Phe His Ser Gln Val Asn Leu Ala Gly Arg
341          165          170          175
344 Thr Trp Asp Leu Trp Thr Gly Tyr Asn Gly Asn Met Arg Val Tyr Ser
345          180          185          190
348 Phe Leu Pro Pro Ser Gly Asp Ile Arg Asp Phe Ser Cys Asp Ile Lys
349          195          200          205
352 Asp Phe Phe Asn Tyr Leu Glu Arg Asn His Gly Tyr Pro Ala Arg Glu
353          210          215          220
356 Gln Asn Leu Ile Val Tyr Gln Val Gly Thr Glu Cys Phe Thr Gly Gly
357 225          230          235          240
360 Pro Ala Arg Phe Thr Cys Arg Asp Phe Arg Ala Asp Leu Trp
361          245          250

```

## RAW SEQUENCE LISTING

DATE: 07/10/2006

PATENT APPLICATION: US/10/583,676

TIME: 18:21:45

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\07102006\J583676.raw

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364 <210> SEQ ID NO: 5
365 <211> LENGTH: 388
366 <212> TYPE: PRT
367 <213> ORGANISM: Humicola insolens
369 <400> SEQUENCE: 5
371 Met Lys His Ser Val Leu Ala Gly Leu Phe Ala Thr Gly Ala Leu Ala
372 1 5 10 15
375 Gln Gly Gly Ala Trp Gln Gln Cys Gly Gly Val Gly Phe Ser Gly Ser
376 20 25 30
379 Thr Ser Cys Val Ser Gly Tyr Thr Cys Val Tyr Leu Asn Asp Trp Tyr
380 35 40 45
383 Ser Gln Cys Gln Pro Gln Pro Thr Thr Leu Arg Thr Thr Thr Thr Pro
384 50 55 60
387 Gly Ala Thr Ser Thr Thr Arg Ser Ala Pro Ala Ala Thr Ser Thr Thr
388 65 70 75 80
391 Pro Ala Lys Gly Lys Phe Lys Trp Phe Gly Ile Asn Gln Ser Cys Ala
392 85 90 95
395 Glu Phe Gly Lys Gly Glu Tyr Pro Gly Leu Trp Gly Lys His Phe Thr
396 100 105 110
399 Phe Pro Ser Thr Ser Ser Ile Gln Thr His Ile Asn Asp Gly Phe Asn
400 115 120 125
403 Met Phe Arg Val Ala Phe Ser Met Glu Arg Leu Ala Pro Asn Gln Leu
404 130 135 140
407 Asn Ala Ala Phe Asp Ala Asn Tyr Leu Arg Asn Leu Thr Glu Thr Val
408 145 150 155 160
411 Asn Phe Ile Thr Gly Lys Gly Lys Tyr Ala Met Leu Asp Pro His Asn
412 165 170 175
415 Phe Gly Arg Tyr Tyr Glu Arg Ile Ile Thr Asp Lys Ala Ala Phe Ala
416 180 185 190
419 Ser Phe Phe Thr Lys Leu Ala Thr His Phe Ala Ser Asn Pro Leu Val
420 195 200 205
423 Val Phe Asp Thr Asn Asn Glu Tyr His Asp Met Asp Gln Gln Leu Val
424 210 215 220
427 Phe Asp Leu Asn Gln Ala Ala Ile Asp Ala Ile Arg Ala Ala Gly Ala
428 225 230 235 240
431 Thr Ser Gln Tyr Ile Met Val Glu Gly Asn Ser Trp Thr Gly Ala Trp
432 245 250 255
435 Thr Trp Asn Val Thr Asn Asn Asn Leu Ala Ala Leu Arg Asp Pro Glu
436 260 265 270
439 Asn Lys Leu Val Tyr Gln Met His Gln Tyr Leu Asp Ser Asp Gly Ser
440 275 280 285
443 Gly Thr Ser Thr Ala Cys Val Ser Thr Gln Val Gly Leu Gln Arg Val
444 290 295 300
447 Ile Gly Ala Thr Asn Trp Leu Arg Gln Asn Gly Lys Val Gly Leu Leu
448 305 310 315 320
451 Gly Glu Phe Ala Gly Gly Ala Asn Ser Val Cys Gln Gln Ala Ile Glu
452 325 330 335
455 Gly Met Leu Thr His Leu Gln Glu Asn Ser Asp Val Trp Thr Gly Ala
456 340 345 350

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**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/583,676

DATE: 07/10/2006

TIME: 18:21:46

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\07102006\J583676.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application No

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date



**Raw Sequence Listing before editing  
(for reference only)**



IFWP

## RAW SEQUENCE LISTING

DATE: 07/06/2006

PATENT APPLICATION: US/10/583,676

TIME: 13:57:03

Input Set : A:\01-SQ Listing-19 Jun 2006.txt

Output Set: N:\CRF4\07062006\J583676.raw

3 <110> APPLICANT: Festersen, Rikke Monica  
 4 Nielsen, Anders Viksoe  
 5 Joergensen, Christel Thea  
 6 Christensen, Lars Lehmann Hylling  
 8 <120> TITLE OF INVENTION: Mashing Process  
 10 <130> FILE REFERENCE: 10429.204-US  
 C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/583,676  
 C--> 12 <141> CURRENT FILING DATE: 2006-06-19  
 12 <160> NUMBER OF SEQ ID NOS: 20  
 14 <170> SOFTWARE: PatentIn version 3.3

**Does Not Comply  
 Corrected Diskette Needed**

## ERRORED SEQUENCES

1744 <210> SEQ ID NO: 20  
 1745 <211> LENGTH: 232  
 1746 <212> TYPE: PRT  
 1747 <213> ORGANISM: T.reesei  
 1750 <220> FEATURE:  
 1751 <221> NAME/KEY: PEPTIDE  
 1752 <222> LOCATION: (1)..(232)  
 1754 <400> SEQUENCE: 20

P2

1756	Met	Lys	Phe	Leu	Gln	Val	Leu	Pro	Ala	Leu	Ile	Pro	Ala	Ala	Leu	Ala
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1760	Gln	Thr	Ser	Cys	Asp	Gln	Trp	Ala	Thr	Phe	Thr	Gly	Asn	Gly	Tyr	Thr
1761				20				25					30			
1764	Val	Ser	Asn	Asn	Leu	Trp	Gly	Ala	Ser	Ala	Gly	Ser	Gly	Phe	Gly	Cys
1765			35				40					45				
1768	Val	Thr	Ala	Val	Ser	Leu	Ser	Gly	Gly	Ala	His	Ala	Asp	Trp	Gln	Trp
1769		50				55				60						
1772	Ser	Gly	Gly	Gln	Asn	Asn	Val	Lys	Ser	Tyr	Gln	Asn	Ser	Gln	Ile	Ala
1773	65				70				75					80		
1776	Ile	Pro	Gln	Lys	Arg	Thr	Val	Asn	Ser	Ile	Ser	Ser	Met	Pro	Thr	Thr
1777				85				90					95			
1780	Ala	Ser	Trp	Ser	Tyr	Ser	Gly	Ser	Asn	Ile	Arg	Ala	Asn	Val	Ala	Tyr
1781			100				105					110				
1784	Asp	Leu	Phe	Thr	Ala	Ala	Asn	Pro	Asn	His	Val	Thr	Tyr	Ser	Gly	Asp
1785			115				120					125				
1788	Tyr	Glu	Leu	Met	Ile	Trp	Leu	Gly	Lys	Tyr	Gly	Asp	Ile	Gly	Pro	Ile
1789		130				135					140					
1792	Gly	Ser	Ser	Gln	Gly	Thr	Val	Asn	Val	Gly	Gly	Gln	Ser	Trp	Thr	Leu
1793	145				150					155					160	
1796	Tyr	Tyr	Gly	Tyr	Asn	Gly	Ala	Met	Gln	Val	Tyr	Ser	Phe	Val	Ala	Gln

## RAW SEQUENCE LISTING

DATE: 07/06/2006

PATENT APPLICATION: US/10/583,676

TIME: 13:57:03

Input Set : A:\01-SQ Listing-19 Jun 2006.txt

Output Set: N:\CRF4\07062006\J583676.raw

1797					165					170					175	
1800	Thr	Asn	Thr	Thr	Asn	Tyr	Ser	Gly	Asp	Val	Lys	Asn	Phe	Phe	Asn	Tyr
1801					180					185					190	
1804	Leu	Arg	Asp	Asn	Lys	Gly	Tyr	Asn	Ala	Ala	Gly	Gln	Tyr	Val	Leu	Ser
1805					195					200					205	
1808	Tyr	Gln	Phe	Gly	Thr	Glu	Pro	Phe	Thr	Gly	Ser	Gly	Thr	Leu	Asn	Val
1809					210					215					220	
1812	Ala	Ser	Trp	Thr	Ala	Ser	Ile	Asn								
1813	225															
E--> 1819	32															

**VERIFICATION SUMMARY**

**PATENT APPLICATION: US/10/583,676**

**DATE: 07/06/2006**

**TIME: 13:57:04**

**Input Set : A:\01-SQ Listing-19 Jun 2006.txt**

**Output Set: N:\CRF4\07062006\J583676.raw**

L:12 M:270 C: Current Application Number differs, Replaced Current Application No

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:1819 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:20